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Risk-Based Funding in Homeland Security Grant Legislation: Analysis of Issues for the 109th Congress

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Summary

Conferees are expected to meet in late August or early September to resolve differences between the House and Senate versions of H.R. 2360, making appropriations for the Department of Homeland Security (DHS) for the fiscal year FY2006. The House version would appropriate $2.365 billion for state and local homeland security assistance programs in FY2006; the Senate version would appropriate $2.283 billion. The House and Senate also take different approaches to allocating homeland security grants to states and territories. The House version is silent on the matter, although another House-passed bill proposes a risk-based method for allocating grants. The Senate version would provide a base to each state and territory, with the remainder of appropriations allocated based on risk. This CRS report does not address House and Senate differences in the amounts that would be appropriated for homeland security grants; it addresses selected policy questions raised by the grant allocation methods proposed in the two chambers.

Since FY2003, DHS has not allocated any federal homeland security assistance to states and localities based on risk, other than the Urban Area Security Initiative (UASI) program allocations. In the FY2005 DHS appropriations (P.L. 108-334), Congress directed DHS's Office for Domestic Preparedness (ODP) to allocate funding for the State Homeland Security Grant Program (SHSGP), the Law Enforcement Terrorism Prevention Program (LETPP), the Emergency Management Performance Grant Program (EMPG), and Citizen Corps Programs (CCP) in the same manner as the FY2004 allocations. In the absence of statutory or other congressional guidance, DHS allocated the remaining FY2005 homeland security assistance funding in direct proportion to the ratio of each state's population to the total national population.

This CRS report addresses the following three policy questions that may confront the conferees as they consider how homeland security funds are to be allocated to the states:

- What is the difference between a guaranteed *base* allocation and a guaranteed *minimum* allocation? What is the conceptual difference? How would the difference affect the amount of money states would receive?

- What risk factors might be included in a risk-based funding formula?

- Who should determine the risk factors?

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Risk-Based Funding in Homeland Security Grant Legislation: Analysis of Issues for the 109th Congress

Introduction

Conferees are expected to meet in late August or early September to resolve differences between the House and Senate versions of H.R. 2360, making appropriations for the Department of Homeland Security (DHS) for the fiscal year FY2006. The House version would appropriate $2.365 billion for state and local homeland security assistance programs in FY2006; the Senate version would appropriate $2.283 billion[1]. The House and Senate also take different approaches to allocating homeland security grants to states and territories. The House version is silent on the matter, although another House-passed bill (H.R. 1544) proposes a risk-based method for allocating grants. The Senate version would provide a base to each state and territory, with the remainder of appropriations allocated based on risk. This CRS report does not address House and Senate differences in the amounts that would be appropriated for homeland security grants; it addresses selected policy questions raised by the grant allocation methods proposed in the two chambers.

Legislative Context

The context within which conferees will consider the two versions of H.R. 2360 includes three additional elements — first, concern about current DHS practices in allocating homeland security assistance grants to states based on arguably minimal guidance from the USA PATRIOT Act; second, the recommendation of the 9/11 Commission that homeland security assistance supplement state and local resources based on risk and vulnerability; and third, the provisions of H.R. 1544, passed by the House on May 12, 2005, which would establish a risk-based method for distributing grants.

Current DHS Practice. Since FY2003, DHS has allocated funds from only one of its state and local homeland security assistance programs based on risk — the

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[1] The House version of H.R. 2360 proposes to appropriate $750 million for the State Homeland Security Grant Program, $1,215 million for the Urban Area Security Initiative, and $400 million for the Law Enforcement Terrorism Prevention Program; the Senate version of H.R. 2360 proposes to appropriate $1,518 million for "state and local assistance grants," $365 million for the Targeted Infrastructure Protection Program, and $400 million for the Law Enforcement Terrorism Prevention Program.

Urban Area Security Initiative (UASI) program.[2] Other grants were allocated based on a statutorily guaranteed share of available funds or on state population. In FY2003 and FY2004, DHS's Office for Domestic Preparedness (ODP) allocated funds from the other programs[3] using on a formula that guaranteed each state and the District of Columbia a base of 0.75% of total appropriations (0.025% for territories), with the remainder of total appropriations allocated in proportion to the ratio of the recipient jurisdiction's population to the total national population.[4] In the FY2005 Department of Homeland Security (DHS) appropriations (P.L. 108-334), Congress directed ODP to allocate funding for the State Homeland Security Grant Program (SHSGP), the Law Enforcement Terrorism Prevention Program (LETPP), the Emergency Management Performance Grant Program (EMPG), and Citizen Corps Programs (CCP) in the same manner as the FY2004 allocations.[5] In the absence of statutory or other congressional guidance, DHS allocated the remaining FY2005 homeland security assistance funding in direct proportion to the ratio of each state's population to the total national population.[6]

9/11 Commission Recommendation. In August 2004, the National Commission on Terrorist Attacks Upon the United States (9/11 Commission) criticized the allocation of federal homeland security assistance and recommended that the distribution not "remain a program for general revenue sharing."[7] While acknowledging that "every state and city needs to have some minimum infrastructure for emergency response," the 9/11 Commission recommended that state and local homeland security assistance should "supplement state and local resources based on the risks or vulnerabilities that merit additional support." The 9/11 Commission offered two high-risk, vulnerable cities as examples, saying, "Now, in 2004, Washington, D.C., and New York City are certainly at the top of any such list."[8]

H.R. 1544. This bill would direct DHS to allocate 100% of funds appropriated for homeland security assistance to states based on risk, and it would establish a

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[2] The UASI program includes grants to high-threat, high-risk urban areas, port security grants, rail security grants, intercity bus security grants, trucking industry security grants, and buffer zone protection program grants.

[3] The programs include the State Homeland Security Grant Program, the Law Enforcement Terrorism Prevention Program, Citizen Corps Programs, and the Emergency Management Performance Grant Program.

[4] P.L. 107-56 (USA PATRIOT Act), Sec. 1014. Sec. 1014 guarantees each state a base of 0.75% of total appropriations for domestic preparedness; however, it is silent on how the remaining appropriations were to be allocated to states and localities.

[5] Ibid.

[6] U.S. Department of Homeland Security, Office for Domestic Preparedness, *Fiscal Year 2005 Homeland Security Grant Program: Program Guidelines and Application Kit,* (Washington: Nov. 2004), p. 1.

[7] National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report* (Washington: GPO, July 2004), p. 396.

[8] Ibid.

mechanism for doing so. House conferees are likely to take into account the provisions of this bill, which the House passed on May 12, 2005.

This CRS report addresses the following three policy questions that may confront the conferees as they consider how homeland security funds are to be allocated to the states:

- What is the difference between a guaranteed *base* allocation and a guaranteed *minimum* allocation? What is the conceptual difference? How would the difference affect the amount of money states would receive?

- What risk factors might be included in a risk-based funding formula?

- Who should determine the risk factors?

Legislation in the 109th Congress

H.R. 2360, as passed by the House, is silent on how homeland security grants are to be allocated. The committee report accompanying the bill, however, states that until Congress passes a law changing the formula, ODP is to allocate funds to states based on Section 1014 of the USA PATRIOT Act (P.L. 107-56), with the remainder of appropriated funds allocated based on risks.[9]

H.R. 1544 and Senate-passed H.R. 2360 propose to change the distribution formula that DHS uses in allocating federal homeland security assistance funding to states and localities. Both bills propose that DHS use risk factors in determining the allocations, but they differ with regard to amounts to be guaranteed to states and how DHS would be instructed to allocate the remaining amounts based on risk. Among the most salient differences are the following:

- H.R. 1544 proposes to allocate total appropriated funds for DHS homeland security assistance based on risk; but the Senate-passed version of H.R. 2360 proposes a statutory formula to allocate a base amount to each state and locality with the remainder of total appropriated funds based on risk;

- H.R. 1544 proposes to establish a *First Responder Grants Board* to review state homeland security plans and to assist the DHS Secretary in determining state risk-based allocations; but the Senate-passed version of H.R. 2360 proposes to authorize the risk-based allocations

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[9] H.Rept. 109-79, available at [http://www.congress.gov/cgi-lis/cpquery/R?cp109:FLD010:@1(hr079)], visited Aug. 25, 2005. The USA PATRIOT Act sets a base grant for states and the District of Columbia at 0.75% of the appropriated funds.

to states and localities at the discretion of the DHS Secretary (based on threats and risks).

Grant Allocation Methods

Discussions of the bills' formula and other grant allocation provisions follow:

H.R. 1544. This bill proposes to allocate 100% of appropriations for DHS federal homeland security assistance programs based on the discretion of the DHS Secretary (based on threat and risk) and in consultation with a First Responder Grants Board's evaluation and prioritization of state homeland security applications.[10] The First Responder Grants Board would be established to evaluate and prioritize state homeland security applications based on the following risk criteria: "the variables of threat, vulnerability, and consequences with respect to the Nation's population (including transient commuting and tourist populations) and critical infrastructure."[11]

The bill would guarantee a minimum amount to each state — 0.25% of total appropriated funds for SHSGP, LETPP, and UASI to states *without* a significant international border or not adjoining a body of water through which an international boundary line extends.[12] States *with* a significant international border[13] or adjoining a body of water through which an international boundary line extends would be guaranteed a minimum of 0.45% of total appropriations for SHSGP, LETPP, and UASI.[14] U.S. possessions and territories, and eligible tribes (collectively) would be guaranteed a minimum of no less than 0.08% of total appropriations for SHSGP, LETPP, and UASI.[15]

A state would receive the guaranteed minimum if, after DHS allocates funding based on the discretion of the DHS Secretary and the First Responder Grants Board's evaluation and prioritization of applications, the state does not receive 0.25% or 0.45% of total appropriations. As an example, if Wyoming received an amount that equaled 0.20% of total appropriations based on the discretion of the DHS Secretary and the evaluation and prioritization by the First Responder Grants Board, Wyoming would be given an additional 0.05% to reach the guaranteed minimum or "floor"of 0.25% (Wyoming does not have an international border or adjoin a body of water through which an international boundary extends). Wyoming would not receive any additional funding after receiving the guaranteed minimum. The House report accompanying H.R. 2360 (as amended and passed by the House) states that until Congress passes a law changing the formula, ODP would allocate funding to states

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[10] H.R. 1544, Sec. 3, "Sec. 1803".

[11] H.R. 1544, Sec. 3, "Sec. 1804(a)".

[12] H.R. 1544, Sec. 3, "Sec. 1804(c)(5)(A)".

[13] H.R. 1544 proposes the determination of "significant international border" be at the discretion of the DHS Secretary.

[14] H.R. 1544, Sec. 3, "Sec. 1804(c)(5)(B)".

[15] H.R. 1544, Sec. 3, "Sec. 1804(c)(5)(C)-(D)".

based on Section 1014 of the USA PATRIOT Act (P.L. 107-56), with the remainder of appropriated funds allocated based on risks.[16]

H.R. 2360, as Amended and Passed by the Senate. H.R. 2360 would allow states, U.S. possessions, and territories to select either of two options that yields the highest funding level. First, a guaranteed base of 0.55% of total appropriations for SHSGP, LETPP, and UASI would be guaranteed to states, and the District of Columbia (DC). U.S. possessions and territories would receive a base of 0.055% (including Puerto Rico).[17] Second, each state could alternatively choose to receive an amount based on a "sliding scale baseline allocation" calculated by multiplying 0.001 times the sum of (1) its normalized population ratio and (2) its normalized population density ratio.[18] After the funds are distributed, the remainder would be distributed by DHS through the risk assessment process, with a maximum of 50% to be distributed to high-threat urban areas, and the remainder to the states.

A state would receive the base of 0.55% or its "sliding scale allocation" if the latter amount is higher than 0.55%, no matter the risk of terrorist attack. The guaranteed base allocations and the state allocations determined by the population and population density sliding scale together would account for 40% ($762.73 million) of the total appropriation if $1.918 billion (proposed appropriation amount for SHSGP, LETPP, and UASI in H.R. 2360) is used. The remainder would be available for allocation to states and metropolitan regions based on risk criteria identified in the bill (Section 1804(f)(2)-(3)). Population and population density are sometimes considered to be surrogates for risk variables. H.R. 2360 speaks of population and population density, which the Homeland Security Secretary is to consider in determining the risk-based portion of appropriated funds for high-threat metropolitan areas. Under the provisions of H.R. 2360 (as amended and passed by the Senate) they also figure in the determination of sliding scale allocations, which the bill treats separately from the pool of funds available for risk- and vulnerability-based allocation by the Secretary of Homeland Security.

The bill proposes to allocate 50% of the risk-based portion of homeland security assistance funds to major metropolitan regions with the following attributes:

- "target of a prior terrorist attack;
- "had a higher Homeland Security Advisory System threat level than the nation as a whole;
- "large population or high population density;
- "high threat and risk related to critical infrastructure;
- "international border or coastline;

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[16] H.Rept. 109-79.

[17] H.R. 2360, Title VI, "Sec. 1804(f)(1).

[18] H.R. 2360, Title VI, "Sec. 1804(f) sets out the alternatives as follows: (A) the value of a state's population relative to that of the most populous of the 50 states, where the population of the 50 states has been normalized to a maximum value of 100; and (B) one-fourth of the value of a state's population density relative to that of the most densely populated of the 50 states, where the population density of the 50 states has been normalized to a maximum value of 100.

- "bordering at-risk sites or activities in a nearby jurisdiction;
- "unmet essential first responder capabilities; and
- "any other threat factors as determined by the DHS Secretary."[19]

The bill proposes to allocate the remaining 50% of the risk-based portion of homeland security assistance funds to states with the following attributes:

- "target of a prior terrorist attack;
- "had a higher Homeland Security Advisory System threat level than the nation as a whole;
- "high percent of state's population residing in a metropolitan statistical area (as defined by the Office of Management and Budget);
- "threat and risk related to critical infrastructure;
- "international border or coastline;
- "bordering at-risk sites or activities in a nearby jurisdiction;
- "unmet first responder essential capabilities; and
- "any other threat factors as determined by the DHS Secretary."[20]

Policy Questions

The development and implementation of a risk-based distribution formula, including or excluding a guaranteed base and minimum amounts, raise some policy questions that may confront conferees on the conference on H.R. 1544 and H.R. 2360.

Guaranteed *Minimum* Versus Guaranteed *Base*

Both H.R. 1544, as passed by the House, and H.R. 2360, as passed by the Senate, would guarantee to each state a certain percentage of the total appropriation. H.R. 1544 would guarantee each state a *minimum*; H.R. 2360, as passed by the Senate, would guarantee each state a *base*. On the surface, the two terms may appear to be similar, but they differ in that each is associated with a distinctive method for allocating funds to the states.

A *minimum*, as defined in H.R. 1544, is the smallest amount each state would receive after risk-based state allocations are determined. Were the risk-based calculations to result in any state allocation less that the statutorily defined minimum, the allocations of states receiving more than the minimum would be reduced proportionally so that all states would receive at least the minimum.

A *base,* as defined in the Senate version of H.R. 2360, is an amount guaranteed to each state without regard to risk. After allocation of base amounts to states, H.R.

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[19] H.R. 2360, Title VI, "Sec. 1804(f)(2)".

[20] H.R. 2360, Title VI, "Sec. 1804(f)(3)".

2360, as passed by the Senate, would direct the Secretary of Homeland Security to allocate the remainder to the states based on risk factors listed earlier in this report.

The present allocation of federal homeland security assistance — which includes a *base* — was criticized by the 9/11 Commission, which referred to the base as revenue sharing without regard to a state's risk of terrorist attacks. Some, however, argue that the *base* allocation is a way to ensure that each state receives some sort of homeland security funding and is prepared at some level for terrorist attacks.

As conferees negotiate to resolve House and Senate differences on homeland security grant funding, they may want to consider whether to legislate the grant allocation method with a guaranteed *base* or guaranteed *minimum*. That is, they may want to decide whether (A) to provide every state with the same amount of *base* funding, and then allocate the remainder of total appropriations based on risk; or (B) to allocate total appropriations based on risk, and then if a state would not receive a certain amount or percentage (*minimum*), provide additional funding to the state to meet this amount or percentage.

The following tables display guaranteed base, minimum, and risk-based amounts proposed in H.R. 1544 and the Senate version of H.R. 2360 assuming the FY2005 appropriation of $2.7 billion for DHS homeland security assistance.[21]

Table 1. H.R. 1544 Guaranteed Minimum and Risk-Based Allocations

(Millions of dollars)

	Amount	Percentage
Assumed Total Funding	$2,700.00	100.0%
Amount to be allocated by DHS based on risk	$2,700.00	100.0%
Amount to Be Allocated by DHS Based on Minimums	$444.69	16.5%
0.25% minimum to states without an international boundary or bordering on a body of water with an international boundary	*$238.14*	*8.8%*
0.45% minimum to states with an international boundary or bordering on a body of water with an international boundary	*$206.55*	*7.7%*

Note: CRS is unable to determine individual state risk-based amounts. Guaranteed minimum amounts and percentages are based on the assumption that states would receive nothing more than the guaranteed minimum; one could, however, assume the majority of states would receive risk-based funding above the guaranteed minimum amount.

[21] In FY2005, Congress appropriated $1.1 billion for SHSGP, $400 million for LETPP, and $1.2 billion for UASI.

Table 2. Senate Passed H.R. 2360 Guaranteed Base and Risk-Based Allocations

(Millions of dollars)

	Amount	Percentage
Assumed Total funding	$2,700.00	100.0%
Base amount allocated to states	$1,062.44	39.3%
Sliding scale amount	*$290.12*	*10.7%*
0.55% guaranteed base amount allocated to states	*$772.32*	*28.6%*
Remainder to be allocated by DHS based on risk	$1,637.56	60.7%

Note: CRS is unable to determine individual state risk-based amounts.

The following table depicts the estimated guaranteed amounts each state would be allocated under the bills, assuming a $2.7 billion appropriation. Under H.R. 2360, as amended and passed by the Senate, the majority of states would receive $14.85 million as a *base*, with some states receiving a larger *base* amount (for example California would receive $81.07 million). Under H.R. 1544, states guaranteed a *minimum* of 0.25% would receive at least $6.75 million, and the states guaranteed a *minimum* of 0.45% would receive at least $12.15 million.

Table 3. Senate Passed H.R. 2360 Guaranteed Base and H.R. 1544 Guaranteed Minimum State Allocations Assuming the FY2005 Appropriation of $2.7 Billion[A]

(All amounts in millions)

State	Senate Passed H.R. 2360 (Includes SHSGP, UASI, and LETTP)[B]		H.R. 1544 (Includes SHSGP, UASI, and LETTP)[C]	
	Fixed Base[D]	Sliding Scale Base[E]	0.25%[F]	0.45%[G]
Alabama	$14.85	—	$6.75	—
Alaska	$14.85	—	—	$12.15
Arizona	$14.85	—	—	$12.15
Arkansas	$14.85	—	$6.75	—
California	—	$81.07	—	$12.15
Colorado	$14.85	—	$6.75	—
Connecticut	—	$19.46	$6.75	—
Delaware	$14.85	—	$6.75	—
Florida	—	$42.77	$6.75	—
Georgia	—	$21.52	$6.75	—
Hawaii	$14.85	—	$6.75	—
Idaho	$14.85	—	—	$12.15
Illinois	—	$31.14	$6.75	—
Indiana	—	$16.29	$6.75	—
Iowa	$14.85	—	$6.75	—
Kansas	$14.85	—	$6.75	—

State	Senate Passed H.R. 2360 (Includes SHSGP, UASI, and LETTP)[B]		H.R. 1544 (Includes SHSGP, UASI, and LETTP)[C]	
	Fixed Base[D]	Sliding Scale Base[E]	0.25%[F]	0.45%[G]
Kentucky	$14.85	—	$6.75	—
Louisiana	$14.85	—	$6.75	—
Maine	$14.85	—	—	$12.15
Maryland	—	$21.33	$6.75	—
Mass.	—	$27.30	$6.75	—
Michigan	—	$27.40	—	$12.15
Minnesota	$14.85	—	—	$12.15
Mississippi	$14.85	—	$6.75	—
Missouri	$14.85	—	$6.75	—
Montana	$14.85	—	—	$12.15
Nebraska	$14.85	—	$6.75	—
Nevada	$14.85	—	$6.75	—
New Hamp.	$14.85	—	—	$12.15
New Jersey	—	$38.05	$6.75	—
N. Mexico	$14.85	—	—	$12.15
New York	—	$48.10	—	$12.15
N. Carolina	—	$21.28	$6.75	—
N. Dakota	$14.85	—	—	$12.15
Ohio	—	$29.28	—	$12.15
Oklahoma	$14.85	—	$6.75	—
Oregon	$14.85	—	$6.75	—
Penn.	—	$31.27	—	$12.15
Rhode Is.	—	$19.36	$6.75	—
S. Carolina	$14.85	—	$6.75	—
S. Dakota	$14.85	—	$6.75	—
Tennessee	—	$15.06	$6.75	—
Texas	—	$49.83	—	$12.15
Utah	$14.85	—	$6.75	—
Vermont	$14.85	—	—	$12.15
Virginia	—	$19.16	$6.75	—
Washington	$14.85	—	—	$12.15
W. Virginia	$14.85	—	$6.75	—
Wisconsin	$14.85	—	—	$12.15
Wyoming	$14.85	—	$6.75	—
DC	$14.85	—	$6.75	—
Puerto Rico	$9.45	—	$6.75	—
Virgin Is.	$1.49	—	$2.16	—
Guam	$1.49	—	$2.16	—
Am. Samoa	$1.49	—	$2.16	—
N. Marianas	$1.49	—	$2.16	—
Total	**$505.46**	**$559.67**	**$238.14**	**$206.55**

[A] In the FY2005 DHS appropriations (P.L. 108-334), Congress appropriated $1,100 million for SHSGP and $400 million for LETPP. SHSGP and LETPP were distributed to states based on a guaranteed minimum base of 0.75% of total appropriations for the programs. Actual FY2005 minimum allocation, including SHSGP and LETPP, was $11.25 million for States and $3.75 million for territories.

[B] Senate passed H.R. 2360, Title VI, Sec. 4 consolidates SHSGP, UASI, and LETPP into a single program — TBHSGP. In the FY2005 DHS appropriations, Congress appropriated $1,100 million for SHSGP, $1,200 million for UASI, and $400 million for LETPP.

[C] H.R. 1544, Sec. 3 does not consolidate SHSGP, UASI, and LETPP into a single covered grant.

[D] States and D.C. receive 0.55% of TBHSGP; Puerto Rico receives 0.35%; and other U.S. territories and possessions receive 0.055% of total appropriations.

[E] States choose to receive either the sliding scale baseline minimum (explained in Appendix A) or the 0.55% minimum.

[F] 0.25% is not a base, but an amount a state is guaranteed if it does not have a "significant international border" or does not border on a body of water through which an international boundary runs. H.R. 1544 authorizes DHS to determine what constitutes a "significant international border."

[G] 0.45% is not a base, but an amount a state is guaranteed if it has a "significant international border" or borders on a body of water through which an international boundary runs. H.R. 1544 authorizes DHS to determine what constitutes a "significant international border."

Risk-Based Factors

A fundamental policy question associated with risk-based funding is what risk factors to use in determining the allocation of federal homeland security assistance. Examples of possible risk factors include such factors as threats, homeland security capabilities, population, critical infrastructure assets, transportation assets, and other factors. To accurately assess the risk factors, one would need to determine the threat to the population factors, critical infrastructure, transportation, and the like, and determine the consequences of such a threat. Additionally, the homeland security capabilities needed to prevent, respond to, and recover from terrorist attacks, and natural and technical disasters would need to be assessed. The methods of threat and vulnerability assessment suggest a variety of factors that might be used in devising a risk-based funding formula for allocating homeland security assistance to states and localities. See **Appendix A** for a list of possible threat, homeland security capability, population, critical infrastructure, transportation, and other factors that might be considered in a risk assessment.

Evaluating Potential Risk Factors. In considering such factors, however, Congress is faced with a question of what criteria to use when assessing potential risk-based formula variables. Risk factors include threats, the entity threatened, and the consequences of the threat to the specified entity. The agreement of potential risk factors is appropriately considered against the following criteria: [22]

1. Validity. Do the factors serve as measures or indicators of threats, the vulnerability of the potential target, or potential consequence if catastrophe strikes the target? For example, does higher population density indicate greater vulnerability to an attack involving a weapon of mass destruction? What attributes associated with

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[22] For a discussion of criteria for evaluating the suitability of quantitative indicators see, for example, Raymond A. Bauer, *Social Indicators* (Cambridge, MA: MIT Press, 1966). See also Anona Armstrong, "Difficulties of Developing and Using Social Indicators to Evaluate Government Programs: A Critical Review." Paper presented at the 2002 Australasian Evaluation Society Conference, Nov. 2002, Wollongong, Australia.

densely populated areas (e.g., numbers of law enforcement personnel on duty, the presence of sensors, cameras, and other technology) would reduce the validity of the factor?

2. Relevance. What is the relationship between the factors and the identified items or characteristics? Is the relationship straightforward, or is it murky? For example, the total number of vehicles traveling through a mid-city tunnel would probably not be pertinent to a consideration of the risk of a hazardous material accident. The number of commercial trucks carrying hazardous material, however, would be more relevant.

3. Reliability. The quality of the source of the information used in a risk assessment process require consideration. For example, population data from the U.S. Census Bureau are generally regarded as reliable and are used in a variety of formulas for allocating aid grants.

4. Timeliness. The currency of the data affects the quality of the discussion on potential risks. For example, daily intelligence reports that provide information on current terrorist threats would be considered more timely than a monthly or quarterly report.

5. Availability. Data necessary for the risk factor's use as a formula variable should arguably be readily and publicly available. Intelligence information that has been classified by the federal government and not shared with state and local officials would fail to satisfy this criterion.

Authority to Select of Risk Factors

Who should identify the risk factors that will determine funding is another fundamental policy question. H.R. 1544 and H.R. 2360 propose risk factors that DHS is to consider, but both bills propose to give a large degree of discretion to DHS. Even though H.R. 1544 proposes a list of risk factors for the First Responders Grants Board to evaluate and prioritize, it proposes that the DHS Secretary use discretion in the final determination in risk-based funding allocations to states and localities. H.R. 2360 provides a larger list of risk factors, but it does not specify what threats are to be considered.

Given the importance of data availability as a criterion, Congress may not be in a position to accurately determine specific risk factors, but because of its oversight responsibilities, Congress might want to review DHS' risk-based methodology and risk-based distribution formula. The oversight could address the weights given to risk factors, specific threats to key assets and critical infrastructure, and plausible consequences to identified threats. On the other hand, by allowing a large degree of discretion to DHS in allocating federal homeland security assistance, Congress may not be able to determine in open hearings the reasoning behind the distribution of funding to states and localities.

Appendix A: Potential Risk Factors — A Discussion

Examples of possible risk factors include such factors as threats, homeland security capabilities, population, critical infrastructure assets, transportation assets, and other factors. In order to accurately assess the risk factors, one would need to determine the threat to the population factors, critical infrastructure, transportation, and the like, and determine the consequences of such a threat. Additionally, the homeland security capabilities needed to prevent, respond to, and recover from terrorist attacks, and natural and technical disasters would need to be assessed.

Threat

Homeland Security threats facing the nation can be divided into terrorist attacks, and natural and technical (such as an accidental chemical spill) disasters. For a terrorist threat to be valid, intelligence or other indicators would have to show the plausibility of the threat. The risk criteria factor of *availability* of data, as stated earlier in the report, may cause some to question the validity of the threat because of the possible security classification of the intelligence.

Additionally, DHS is responsible for preparing for, responding to, and recovering from natural and technical disasters. One could argue that history has proven the nation is threatened more by natural and technical disasters than terrorist attacks. The 67 major disaster declarations in 2004 lend validity to this argument.[23]

Potential terrorist threats include:

- biological and chemical agents;
- WMD incidents;
- sniper and shooting incidents; and
- car and suicide bombers.

Potential natural and technical disaster threats include:

- hurricanes;
- flooding;
- earthquakes;
- landslides; and
- accidental hazardous material incidents.

Homeland Security Capability

Homeland security capabilities are the abilities, plans, training, personnel, and equipment of federal, state, and local government officials, first responders, and entities to prevent, respond to, and recover from terrorist attacks, and natural and technical disasters. In order to assess federal, state, and local homeland security

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[23] See Federal Emergency Management Agency, "2004 Major Disaster Declarations," available at [http://www.fema.gov/news/disasters.fema?year=2004], visited May 19, 2005.

capabilities, one would need to identify threats, key assets and critical infrastructure, vulnerabilities, and consequences of terrorist attacks, and natural and technical disasters. Once the assessments are completed government officials, first responders, and other key stakeholders can determine the necessary capabilities. Potential homeland security capabilities might include:

- emergency management plans;
- homeland security plans;
- identified essential tasks needed for responding to terrorist attacks, and disasters;
- counter-terrorism training;
- natural and technical disaster training;
- identified personnel with assigned prevention, response, and recovery tasks;
- personnel protective equipment;
- interoperable communications equipment and plans;
- emergency medical response plans and equipment; and
- hospital mass casualty plans and equipment.

Population

- Population — Population, a number of people in each state relative to the nation as a whole, is arguably a suitable factor since a larger number of people can be considered a greater risk.

- Population Density — Population density, the average number of persons per square mile in each state, can be considered a viable factor since a weapon of mass destruction (WMD) attack in an area with a high population density could result in a greater number of casualties than in an area with a low population density.

Critical Infrastructure

- Nuclear Power Plants and Non-Power Reactors — Nuclear power plants have been identified by a number of observers as potential terrorist targets. This includes decommissioned nuclear power plants and non-power reactors, which are typically used in research and training facilities.[24]

- Seaports — Given the possibility of WMD smuggling and the consequent potential for disrupting the national economy, many observers have identified seaports as a critical infrastructure that should be a risk factor.

- Chemical Facilities — Due to the consequences of terrorist attacks on chemical facilities, or the theft of toxic chemical agents, chemical

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[24] See Nuclear Regulatory Commission website [http://www.nrc.gov/reactors.htm], visited May 18, 2005.

facilities could be a risk factor, especially due to the location of some chemical facilities in high population density areas.

- Military Facilities — Pointing to the September 2001 terrorist attack on the Pentagon in Arlington, Virginia, some observers suggest that miliary facilities should be included in a risk-based distribution formula. Such facilities may contain large numbers of military personnel, high-value equipment, and volatile chemicals and explosives (such as ammunition).

- Federal Facilities — Some observers point to the 1995 bombing of the Alfred P. Murrah Building in Oklahoma City as evidence that civilian federal facilities are potential terrorist targets. The consequences of terrorist attacks on federal facilities would increase if the attacks were to disrupt the federal response to attacks or lead to the disruption of vital federal government operations.

- Dams — Dams could be included in a risk-based distribution formula, since a terrorist-caused explosion could potentially release a high volume of water into populated areas, destroy any electrical energy production at the dam, and cause significant economic damage.

- Electrical Power Plants (Non-Nuclear) — The economic and psychological consequences of terrorist attacks on electrical power plants might be a consideration in designating power plants as a risk factor.

- Food and Agricultural Centers — Terrorist attacks on the nation's food supply and agricultural production might be a risk, considering the possible economic and psychological effects of the attacks.

- Oil and Natural Gas Refineries and Pipelines — Even though the majority of oil and natural gas refineries (and the distribution systems 'pipelines') are located in low population density areas, terrorist attacks on them could cause severe economic and environmental consequences.

- Financial Centers — One could point to the elevation of the Homeland Security Advisory System to "high" in August of 2004 when financial institutions were identified as possible targets of terrorist attacks as reason to identify the centers as risk factors. Additionally, a distribution of operations in the nation's financial centers could have possible economic consequences.

Transportation Assets

- Rail and Mass Transit Systems — Arguably, the 2004 and the 2005 terrorist bombings of trains in Madrid, Spain, and London, could

cause some to identify rail and mass transit systems as a risk factor.

- Bridges and Tunnels — Given of the vast number of bridges and tunnels in the nation, considering every one of them as a risk factor is not feasible. Major bridges and tunnels, such as the Brooklyn and Golden Gate bridges and the Holland Tunnel, might be considered risk factors due to their cultural significance. Additionally, bridges and tunnels that are important links in a transportation route for large number of persons might also qualify as a risk factor.

- Airports — One could point to the September 2001 terrorist attacks and the use of commercial aircraft as a weapon as a valid argument for considering airports as a risk factor. Not only are airports at risk of terrorists boarding aircraft and using them as weapons, some may argue that an attack on a crowded airport or the shooting down of aircraft while landing or taking off further increases the risk and the consequences of an attack.

Other Factors

- Stadiums and Arenas — Because of the large number of persons concentrated in a relatively small location, stadiums and arenas — especially during significant events such as sport championship games — could be considered a risk factor.

- Educational Institutions — Arguably, the psychological consequences of terrorist attacks would be greatly increased if terrorists were to target educational institutions, at the elementary, secondary, college level. Given the sense of vulnerability parents would experience following such an attack, educational institutions might be considered a risk factor; however, like bridges and tunnels, the vast number of educational institutions in the nation may hamper the risk assessment of such an attack.

- Skyscrapers and Large Commercial Buildings — As with the attack on the Pentagon in September 2001, the attack on the World Trade Center Towers arguably identifies skyscrapers and large commercial buildings as valid risk factors. The economic and psychological consequences give great weight to considering skyscrapers and large commercial buildings as potential risk factors, and the economic and psychological effects on the nation following the September 2001 attacks illustrate this.

- International Border and Coastline — It can be argued that states with international borders and coastline face greater risk of terrorist attacks, since terrorists may have greater access to the state.

- Tourism — Due to the potential for mass casualty incidents and economic damage due to terrorist attacks, tourist locations are a possible risk factor. In addition to the location of tourist destinations, the tourist population could possibly be considered an additional risk factor.